

atoms), an unsaturated chain hydrocarbon group (e.g., a straight-chain or branched alkenyl group having 2 to 6 carbon atoms, a straight-chain or branched alkynyl group having 2 to 6 carbon atoms), an alicyclic hydrocarbon group (e.g., a cycloalkyl group having 3 to 6 carbon atoms, a cycloalkenyl group having 3 to 6 carbon atoms, a cycloalkynyl group having 3 to 6 carbon atoms) and an aromatic hydrocarbon group (e.g., phenyl, naphthyl, anthryl and phenanthryl groups).

[0036]

When  $R^{401}$ ,  $R^{402}$ ,  $R^{403}$ ,  $R^{404}$ ,  $R^{405}$  or  $R^{406}$  is a hydrocarbon group which may have a substituent, examples of the substituent include a halogen atom (e.g., fluorine, chlorine, bromine, iodine), a hydroxyl group, an alkoxy group having 1 to 6 carbon atoms (e.g., methoxy, ethoxy, propoxy, butoxy, pentoxy), an amino group, a carbamoyl group, an alkoxycarbonyl group having 1 to 6 carbon atoms (e.g., methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl), and a heterocyclic group (examples of the heterocyclic ring in the heterocyclic group include a 5- to 7-membered ring having one sulfur, nitrogen or oxygen atom, a 5- to 6-membered ring having 2 to 4 nitrogen atoms, and a 5- to 6-membered ring having one or two nitrogen atoms and one sulfur or oxygen atom, these heterocyclic rings being optionally fused to a 6-membered ring having one or two nitrogen atoms, a benzene ring or a 5-membered ring having one sulfur atom; specific examples of the heterocyclic group include 2-pyridyl, 3-pyridyl, 4-pyridyl, pyrimidyl, pyrazinyl, pyridazinyl, pyrazolyl, imidazolyl, thiazolyl, isothiazolyl, oxazolyl, isoxazolyl, pyrido[2,3-d]pyrimidyl, benzopyranyl, 1,8-naphthyridyl, 1,5-naphthyridyl, 1,6-naphthyridyl, 1,7-naphthyridyl, quinolyl, thieno[2,3-b]pyridyl, tetrazolyl, thiadiazolyl, oxadiazolyl,

## REPLACEMENT SHEET

The alkyl group for  $R^{51}$  may be either straight-chain or branched alkyl group having 1 to 20 carbon atoms, and may specifically be exemplified by methyl, ethyl, n-propyl, i-propyl, n-butyl, i-butyl, sec-butyl, tert-butyl, pentyl, isopentyl, neopentyl, hexyl, heptyl, octyl, nonyl and decyl groups.

Examples of the hydrocarbon group for  $R^{52}$ ,  $R^{53}$ ,  $R^{54}$  and  $R^{55}$  include a saturated chain hydrocarbon group (e.g., a straight-chain or branched alkyl group having 1 to 6 carbon atoms), an unsaturated chain hydrocarbon group (e.g., a straight-chain or branched alkenyl group having 2 to 6 carbon atoms, a straight-chain or branched alkynyl group having 2 to 6 carbon atoms), an alicyclic hydrocarbon group (e.g., a cycloalkyl group having 3 to 6 carbon atoms, a cycloalkenyl group having 3 to 6 carbon atoms, a cycloalkynyl group having 3 to 6 carbon atoms) and an aromatic hydrocarbon group (e.g., phenyl, naphthyl, anthryl and phenanthryl groups).

When  $R^{52}$ ,  $R^{53}$ ,  $R^{54}$  or  $R^{55}$  is a hydrocarbon group which may have a substituent, examples of the substituent include a halogen atom (e.g., fluorine, chlorine, bromine, iodine), a hydroxyl group, an alkoxy group having 1 to 6 carbon atoms (e.g., methoxy, ethoxy, propoxy, butoxy, pentoxy), an amino group, a carbamoyl group, an

alkoxycarbonyl group having 1 to 6 carbon atoms (e.g.,

methoxycarbonyl, ethoxycarbonyl, propoxycarbonyl), and a

heterocyclic group (examples of the heterocyclic ring in the heterocyclic group include a 5- to 7-membered ring having one sulfur, nitrogen or oxygen atom, a 5- to 6-membered ring having 2 to 4 nitrogen atoms, and a 5- to 6-membered ring having one or two nitrogen atoms and one sulfur or oxygen atom, these heterocyclic rings being optionally fused to a 6-membered ring having one or two nitrogen atoms, a benzene ring or a 5-membered